

# Determining Sustainable Waste Management Practices in College and University Dining Services Using the Theory of Planned Behavior



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## PURPOSE & OBJECTIVES

### Primary Purposes:

- Determine the attitudes about sustainable waste management for college and university dining service directors.
- Identify the subjective norms about sustainable waste management for college and university dining service directors.
- Explore the barriers to implementing a sustainable waste management program in college and university dining centers.

### Secondary Purpose:

- Examine differences in attitudes, subjective norms, implementation and barriers about sustainable waste management by age of directors, number of meals served and area of the country.

## BACKGROUND

### 21st century we are facing...

- Overrun of Solid Waste Materials
- Global Warming & Climate Change
- Natural Resource Depletion (Goodland, 1995; Hedin & Likens, 1996; Last, 1993).

### “Green Movement”

- The concept of sustainability has begun to gain momentum in various functions & activities in the hospitality industry (Michael, 1999).
- Strategies for sustainability adopted by governments, institutions, operations & individual households (CNRES, 2006).
- Many colleges & universities joined the green campus competition.
- Thus, college and university foodservice directors play an important role in environment management (especially in sustainable waste management) stewardship.
- Research initiatives address growing consumer awareness and attitudes toward environmental management (Gustin & Weaver, 1996; Jauhari & Manaktola, 2007).
- Studies have focused on identifying “green movement” initiatives for hotels and restaurants and their motivations for environmental management (Bohdanowicz, 2005; Kirk, 1995; Kirk, Lynch, & Tzschetke, 2008; Mensah, 2006).
- To date, few studies conducted to determine college and university foodservice directors’ (FSDs’) attitudes, subjective norms, and barriers to establishing a sustainable waste management (SWM) program.
- Research is needed to measure what factors affect the college and university FSDs’ responses to SWM issues (Aber & Mallory, 2009)

## RESEARCH HYPOTHESES

- H1: College and university FSDs’ attitudes toward waste management are positively associated with their intentions of implementation SWM programs.
- H2: College and university FSDs’ subjective norms toward SWM are positively associated with their intentions of implementing SWM programs
- H3: Barriers of SWM at college and university foodservices are negatively associated with college and university FSDs’ intentions of implementing SWM programs.
- H4: FSDs’ intentions of implementing SWM programs at college and university dining facilities are positively associate their behaviors of implementing SWM programs.

## LITERATURE REVIEW

### Evolution of Sustainability

### Concept of Sustainable Development (three dimensions)

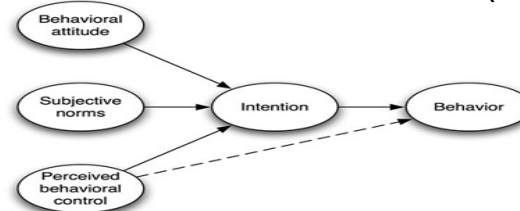
- Social Sustainability
- Environmental Sustainability
- Economic Sustainability

### Sustainable Development (SD) Models (Kitzhaber, 2000).

- Applications for Sustainable Development
- Sustainable Waste Management Initiative (Hotels & Resorts)
- Sustainable Waste Management Initiative(Fast-food Chains)

## METHODOLOGY

### THEORY OF PLANNED BEHAVIOR (TPB)



- To predict whether a person intends to do something, use three predictors: (Ajzen, 1991)
  - If the person is in favor of doing it (‘attitude’)
  - How much the person feels social pressure to accomplish it (‘subjective norms’)
  - If the person feels in control of the action (‘perceived behavioral control’)

## METHODOLOGY (Continued)

### Population & Sample Size

- The population (n=2,936) for this study will be members of National Association of College & University Food Services (NACUFS) directors who have e-mail addresses.
- An instrument will be developed based on previous research and focus group input. A response rate of 20% (n=577) is desired to conduct statistical analysis.

### Data Collection & Statistical Analysis

- An online survey using the Axio system will be e-mailed to FSDs.
- The online letter will introduce the instrument, the research goals, and provide a timeframe for completion.
- A response rate of 20% is desired to conduct statistical analysis.
- SPSS 15.0 used for data analyses
- Statistical significance at P<0.05.

### Research Questionnaire Development

- Experimental Questionnaire Development
- Based on literature review
  - Instrument identification

- Interview Focus Group
- Approximately 25 participants
  - Asses clarity, content, applicability

- Questionnaire Modification
- Modify based on focus group comments and advice

- Questionnaire Pre-test
- Directors, managers, and administrators
  - Modify based on feedback

- Pilot Questionnaire Mailing / Data Collection
- Instrument e-mailed, reminders sent
  - Test reliability of measurement

- Statistical Data Analyses
- Multiple regression and correlation analyses to test hypotheses

## SIGNIFICANCE AND IMPLICATIONS

- No research has measured how differently college and university FSDs are responding to the NACUFS Sustainability Guide. More research is needed in Sustainable Development.
- It helps FSDs to better understand how to apply sustainability knowledge to develop practical outcomes and solutions.
- Limitations: Low response rate for on-line surveys; efforts to increase participation may be required to obtain an adequate sample size; surveys that are self-administered have limitations; can not generalize results to other foodservice operations.